CLAIMS

1. Linear block polymer according to Formula (1)

$$H_2N-R1-N\overset{O}{\underset{H}{C}}-N-R2\left(N-\overset{O}{\underset{H}{C}}-N-R1-N\left(C-N-R2-N-\overset{O}{\underset{H}{C}}-N-R1-N\overset{O}{\underset{H}{C}}-N-R2-N-\overset{O}{\underset{H}{C}}-O-R3-O-\overset{O}{\underset{H}{C}}-N-R2\right)_z N-\overset{O}{\underset{H}{C}}-N-R4\right)$$

(1)
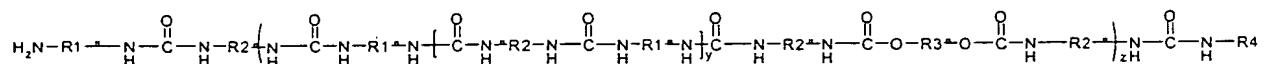
Wherein

R1 is derived from a diamine, e.g. ethylene diamine, 1,2-diamino propane or 1,3-diamino propane;

R2 is derived from an aromatic diisocyanate;

R3 is derived from an esterdiol;

R4 is derived from dibutyl amine or ethanolamine;

Where $0 < y < 4$ and $z > 8$,

c h a r a c t e r i z e d  i n  t h a t,

the monomers from which R2 and R3 are derived from are added in such amounts that the molar ratio between R2 and R3 is larger than 2:1.

2. Linear block polymer according to claim 1, wherein R1 is derived from ethylene diamine, 1,3-diamino propane, 1,2-diamino propane, 1,4-diamino butane, 1,5-diamino pentane, or 1,6-diamino hexane.

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3. Linear block polymer according to claim 1 or 2, wherein R3 is derived from polycaprolactone diol, polydiethylene glycol adipate or poly(pentane diolpimelate).

5     4. Linear block polymer according to any of the preceding claims, wherein R2 is derived from 4,4'diphenyl methane diisocyanate, naphthalene diisocyanate, or toluene diisocyanate.

5. Fibre manufactured from a linear block polymer according to any of the
10     preceding claims.

6. Fibre according to claim 5, which fibre exhibits a toughness of at least 0.1 N/Tex.

15    7. Fibre according to claim 6, which fibre exhibits a toughness above 0.2 N/Tex.

8. Fibre according to any of claims 5-7 which fibre exhibits an elongation at break that is below 100 %.
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9. Fibre according to any of claims 5-7 which fibre exhibits an elongation at break that is 43% or below.

10. Film manufactured from a linear block polymer according to any of the
25     claims 1-4.

11. Porous polymeric material manufactured from a linear block polymer according to any of the claims 1-4.

30   12. Implant for the implantation into the human or animal body, which implant comprises a linear block polymer according to any of the preceding claims.

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